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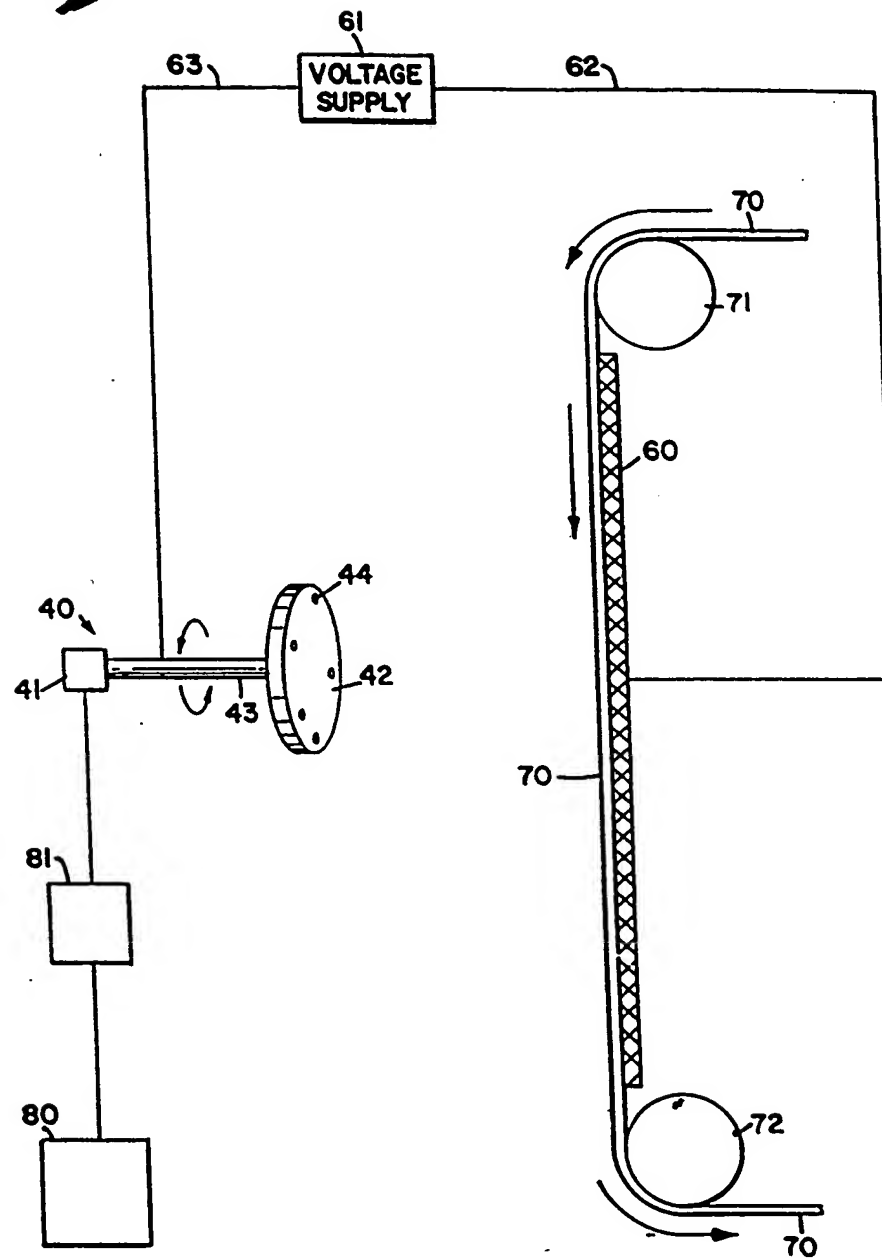
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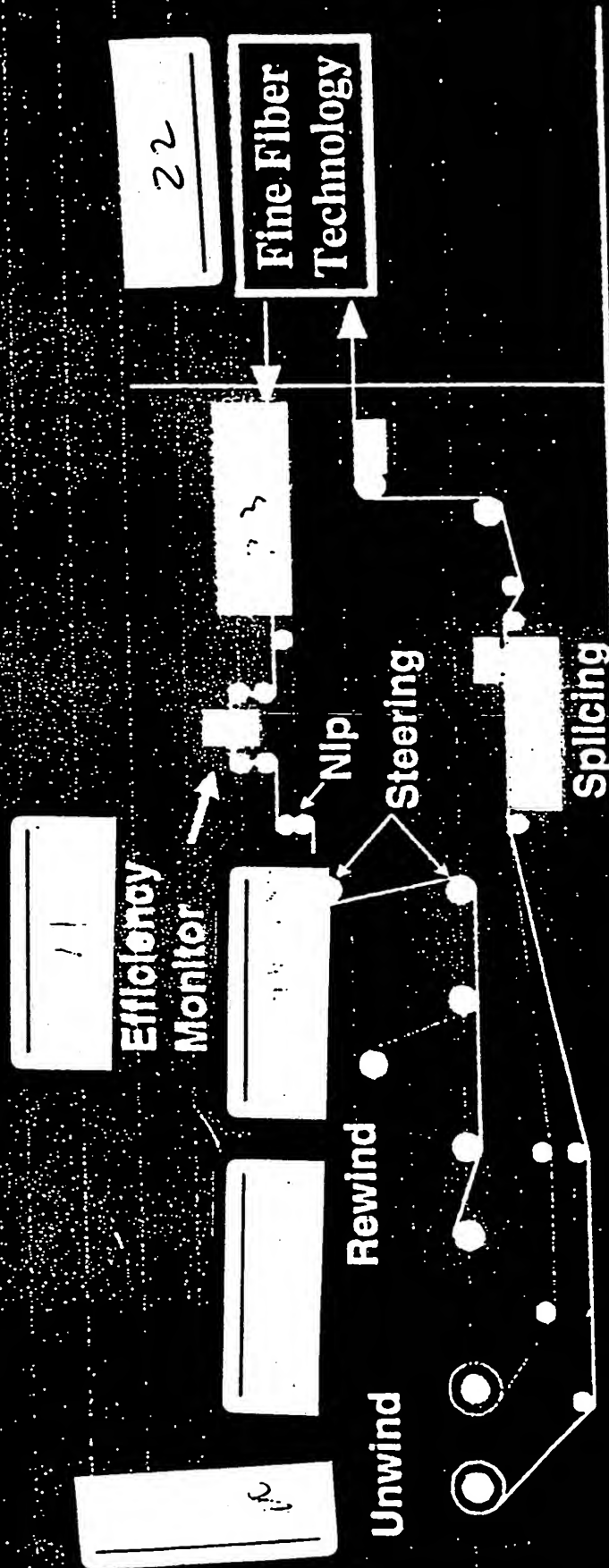
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FIG. 1



Fine Fiber Technology



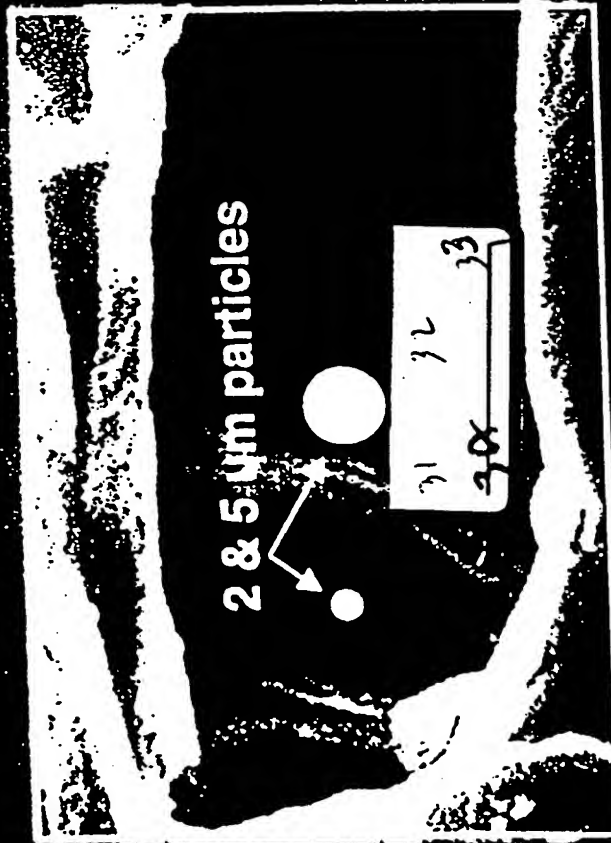
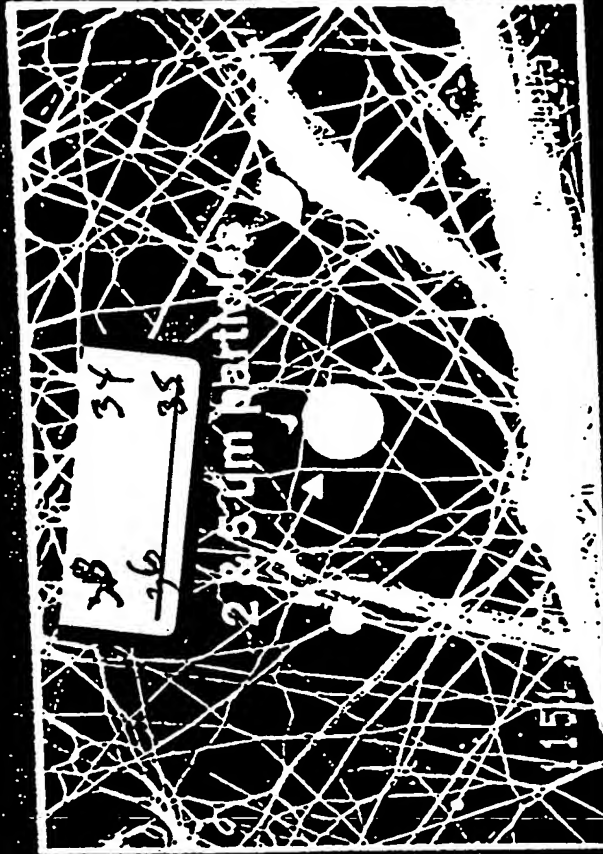
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Ultra-Web®

Cellulose Media



2,000 X Scanning Electron Microscope Images

Donaldson

AGC

Katz Analytical Services, Inc.
1191-20C-3, Sample #: 1, Angle: 65

XPS Multiplex

O 1s

EV/Step: 0.2 eV, Time/Step: 50 mSec, Sweeps: 12

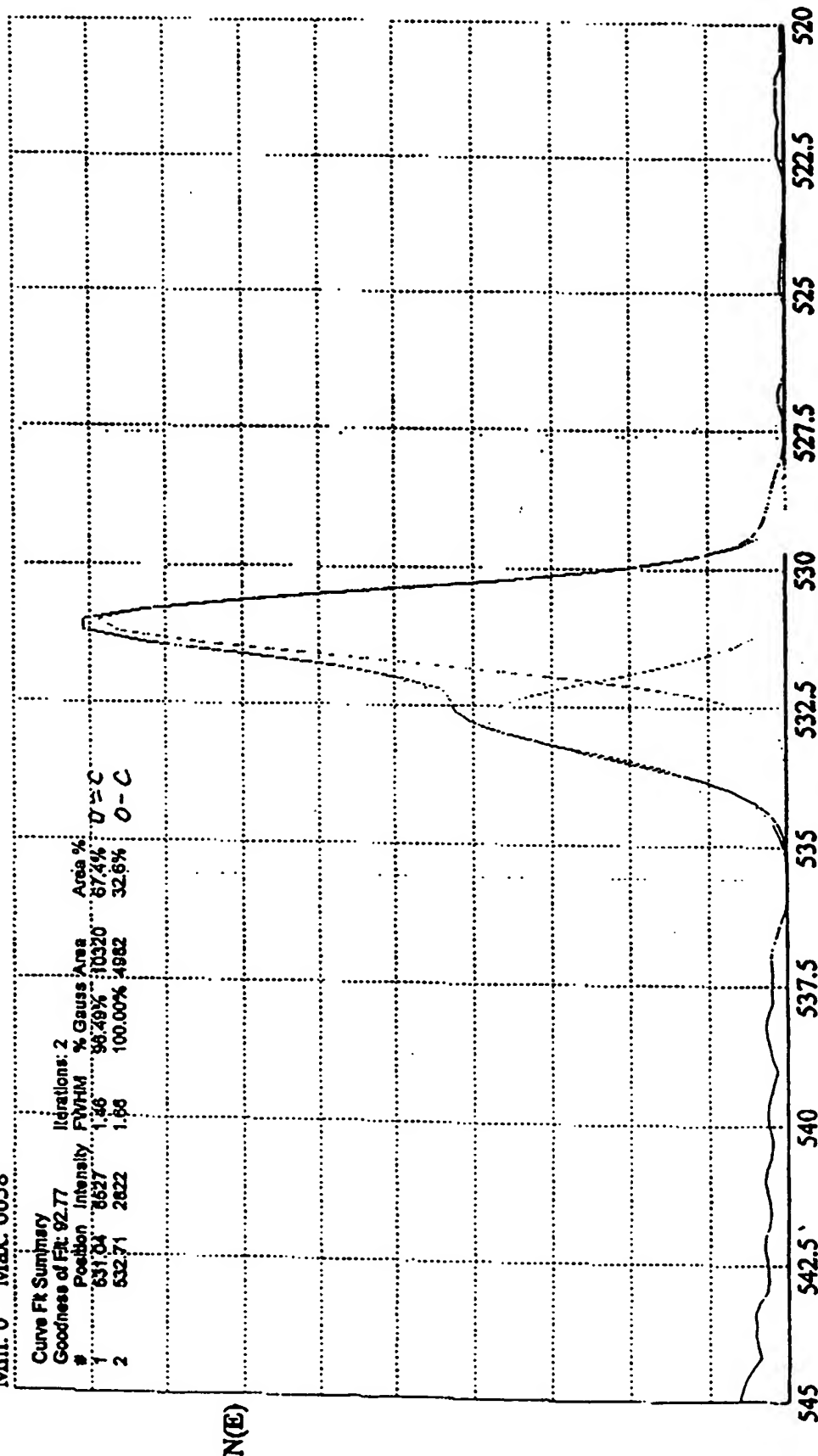
Source: Al, Pass Energy: 71.55 eV, Work Function: 4.1 eV

Fig 4

6A
ESCA O 1s Spectra for Sample As Spun

Min: 0 Max: 6658

Curve Fit Summary				Iterations: 2	
Goodness of Fit: 92.77					
#	Position	Intensity	FWHM	% Gauss	Area
1	531.04	8627	1.86	98.49%	10320
2	532.71	2822	1.86	100.00%	4882
					Area %
					87.4%
					12.6%
					O-C
					O-C



Binding Energy (eV)

File 4

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Katz Analytical Services, Inc.
1191-20C-4, Sample #: 1, Angle: 65

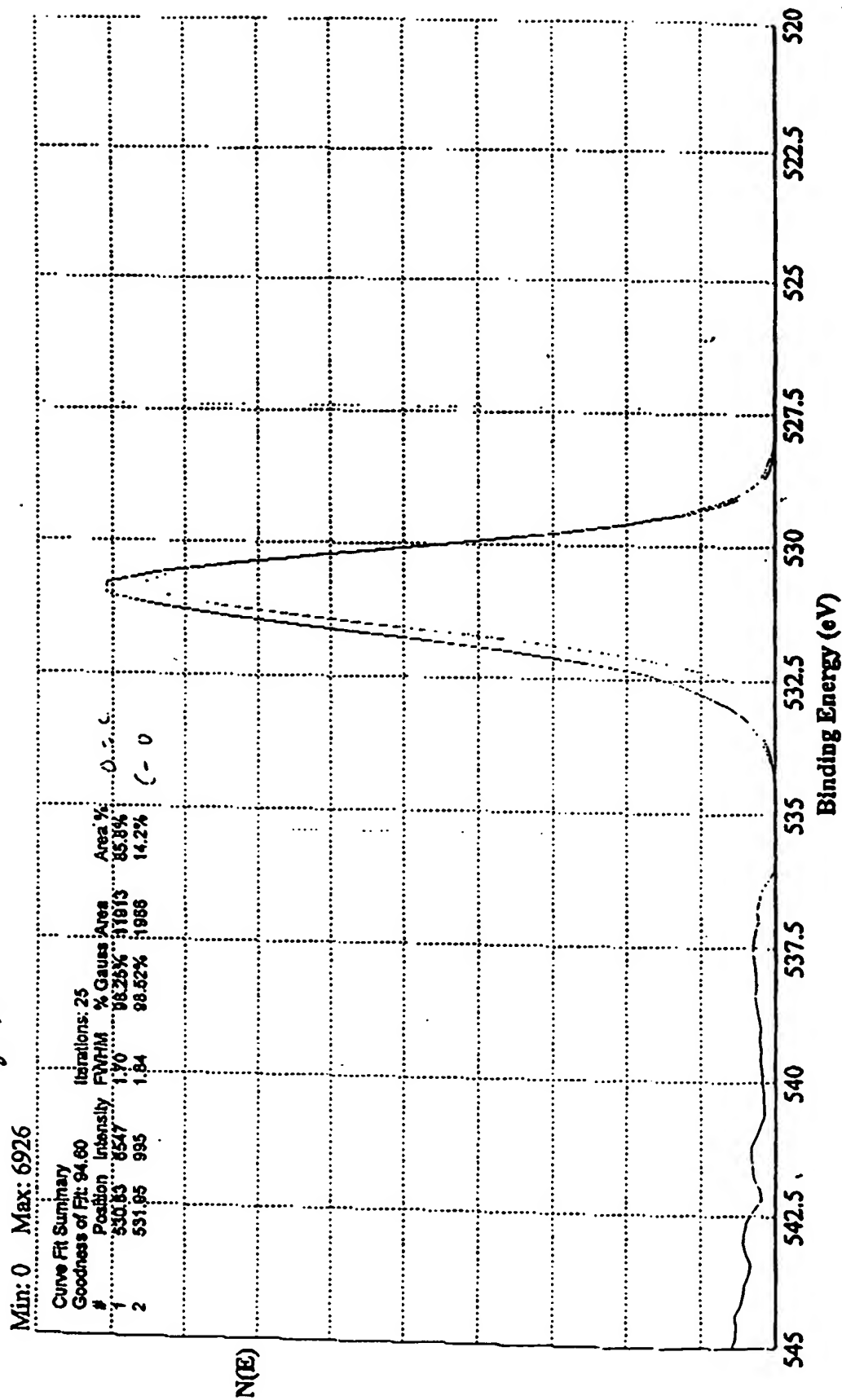
XPS Multiplex

O 1s

EV/Step: 0.2 eV, Time/Step: 50 mSec, Sweeps: 12

Source: Al, Pass Energy: 71.55 eV, Work Function: 4.1 eV

Fig 5. ESCA O 1s Spectra for Heat-Treated Sample



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Katz Analytical Services, Inc.
1191-20C-5, Sample #: 1, Angle: 65

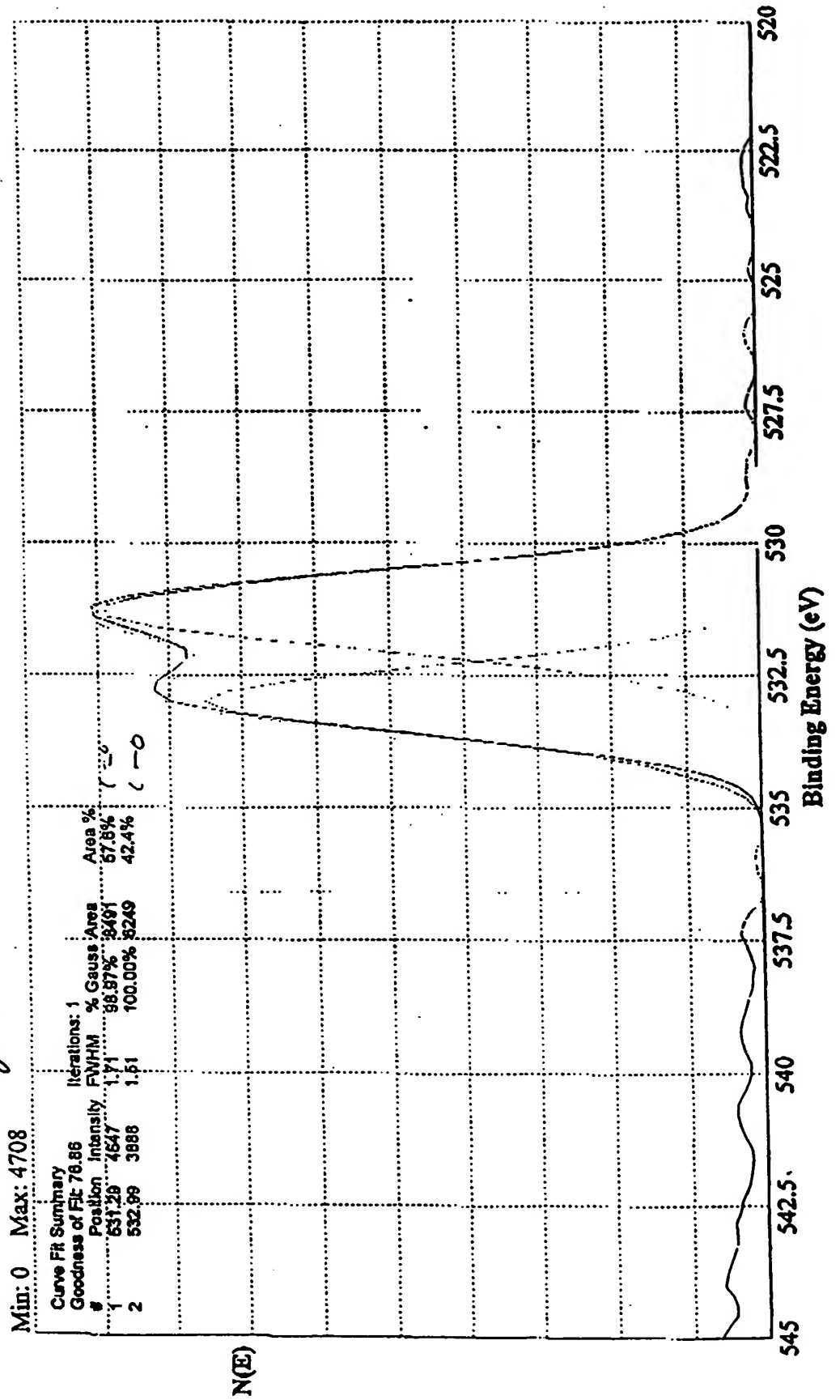
XPS Multiplex

O 1s

EV/Step: 0.2 eV, Time/Step: 50 mSec, Sweeps: 12

Source: Al, Pass Energy: 71.55 eV, Work Function: 4.1 eV

Fig. B, ESCA O 1s spectra for As-Span Example



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[REDACTED]

Katz Analytical Services, Inc.
1191-20C-6, Sample #: 1, Angle: 65

XPS Multiplex

O 1s

EV/Step: 0.2 eV, Time/Step: 50 mSec, Sweeps: 16

Source: Al, Pass Energy: 71.55 eV, Work Function: 4.1 eV

Fig 9 ESCA O1s Spectra for Heat-Treated Sample 6B

Min: 0 Max: 3855

Curve Fit Summary

Goodness of Fit: 96.57

Iterations: 3

Position Intensity FWHM % Gauss Area

1 531.32 3087 1.91 88.79% 3309

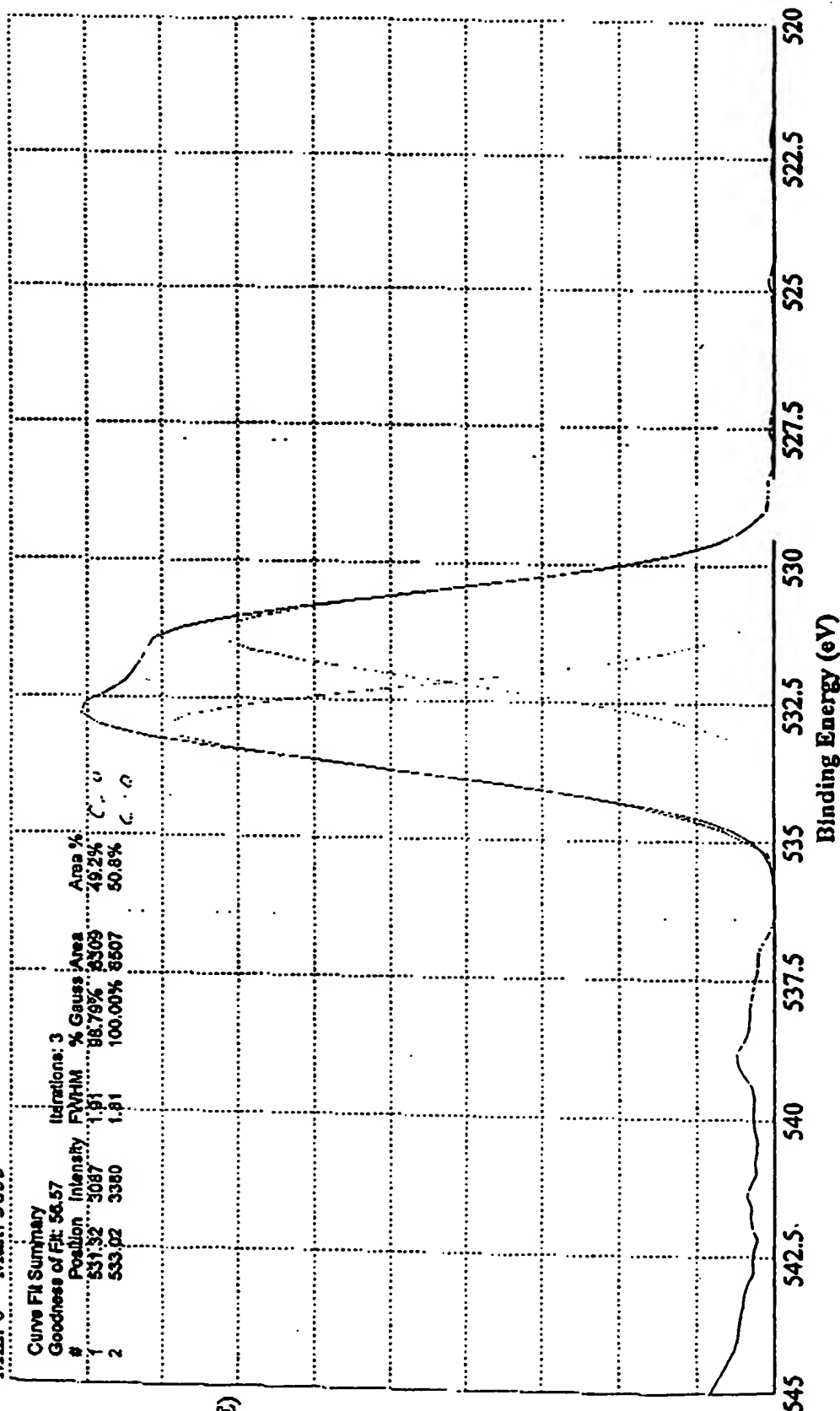
2 533.02 3380 1.81 100.00% 3507

Area %

49.2%

50.8%

N(E)



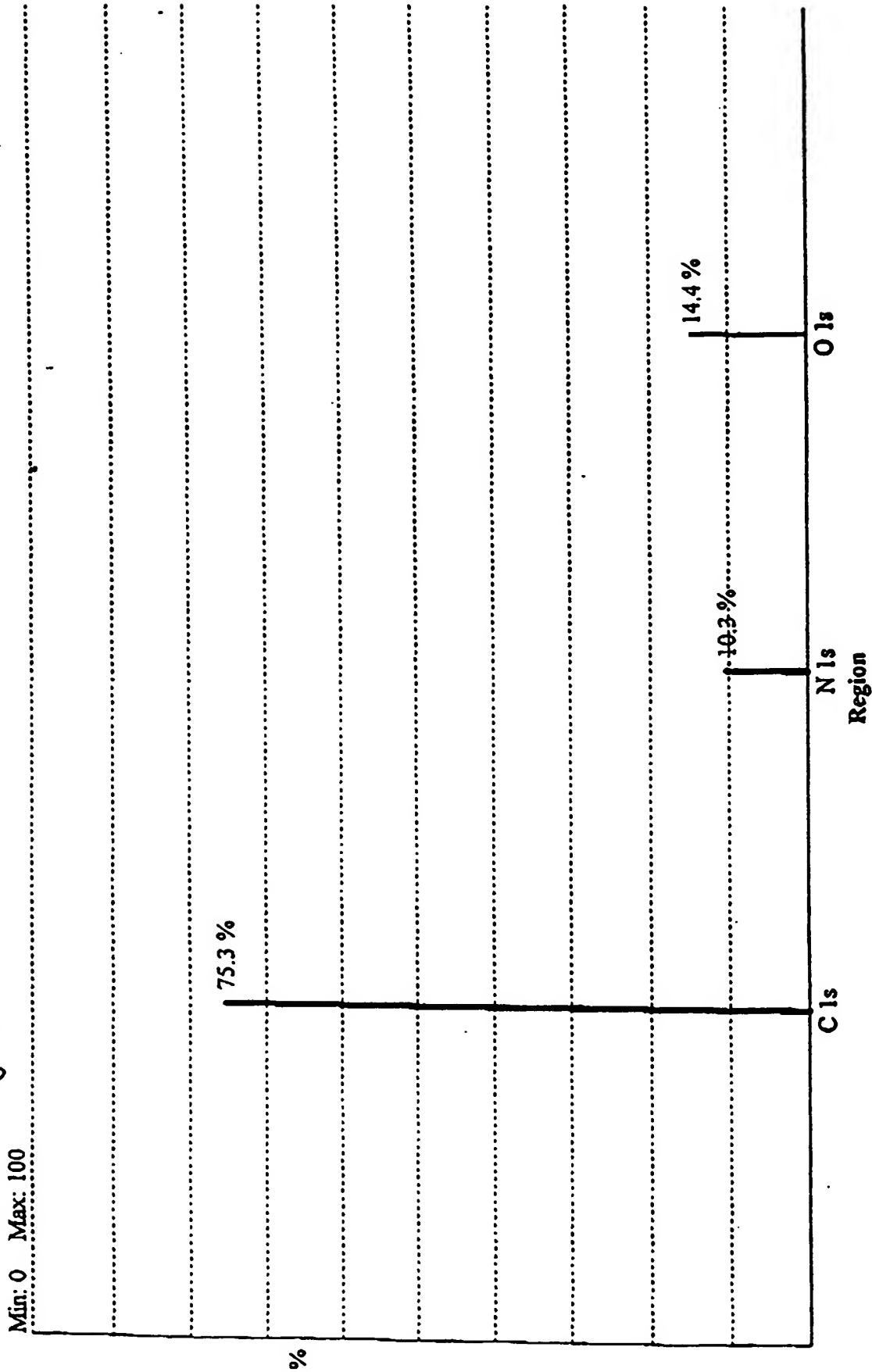
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Katz Analytical Services, Inc.
1191-20C-3, Sample #: 1, Angle: 65

XPS Multiplex

Source: Al, Pass Energy: 71.55 eV, Work Function: 4.1 eV

Fig 8. ESCA Multiplex for As-Spun Sample 6A



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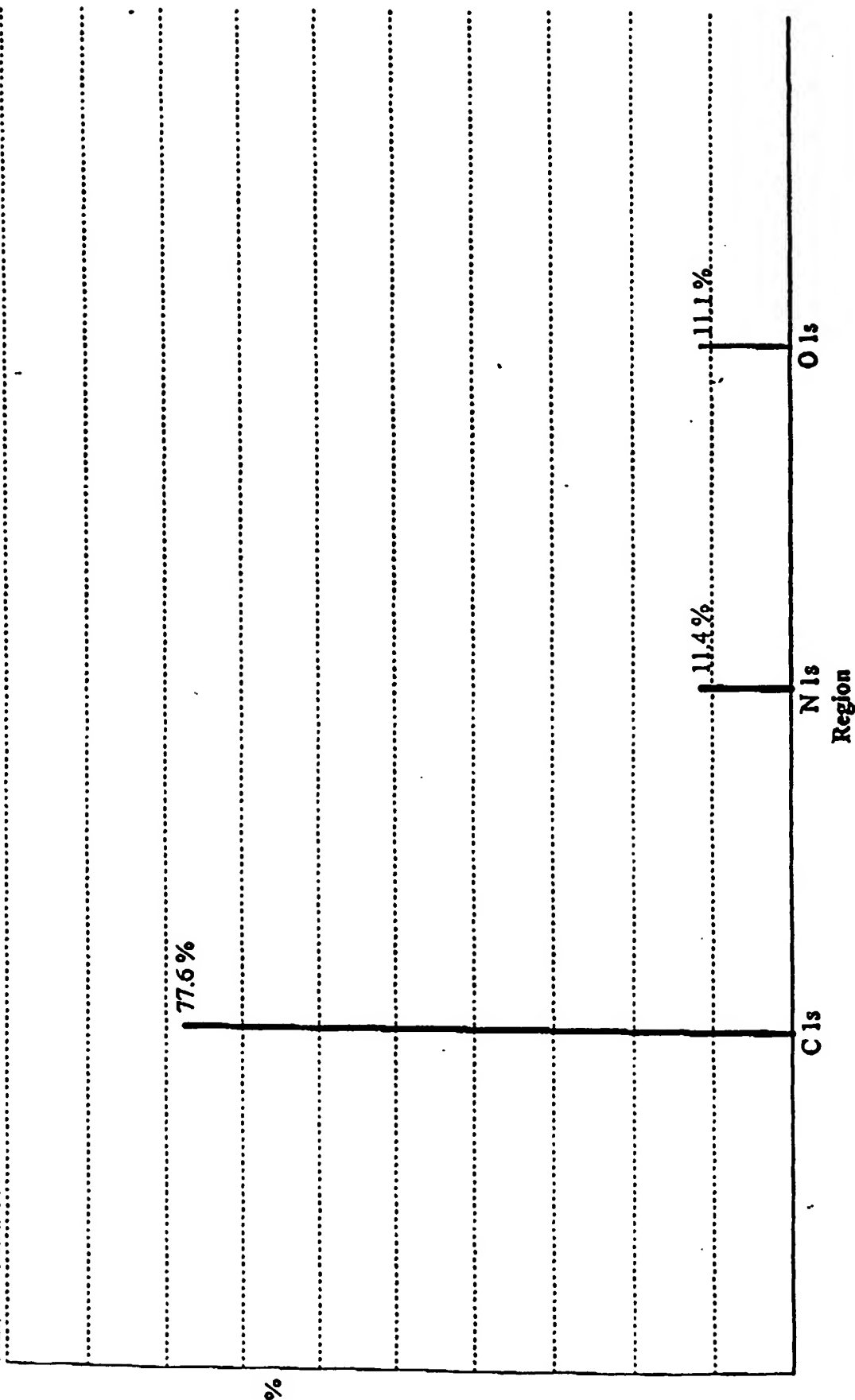
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1191-20C-4, Sample #: 1, Angle: 65

XPS Multiplex

Source: Al, Pass Energy: 71.55 eV, Work Function: 4.1 eV

Fig 9. ESCA Multiplex for Heat Treated Sample 6A

Min: 0 Max: 100



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Katz Analytical Services, Inc.
1191-20C-5, Sample #: 1, Angle: 65

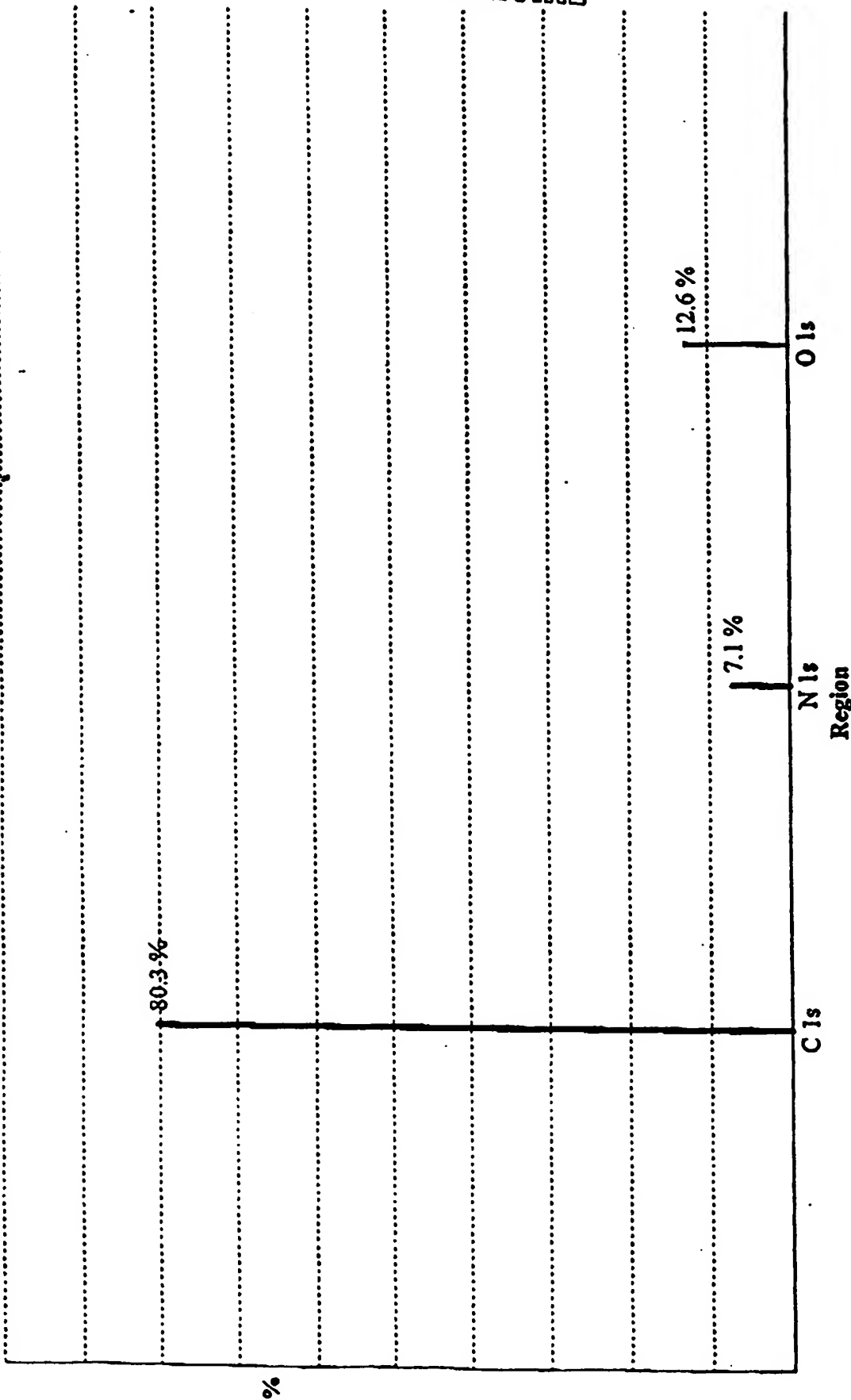
XPS Multiplex

Source: Al, Pass Energy: 71.55 eV, Work Function: 4.1 eV

Fig 10

ESCA Multiplex for As-Spun Sample 6B

Min: 0 Max: 100



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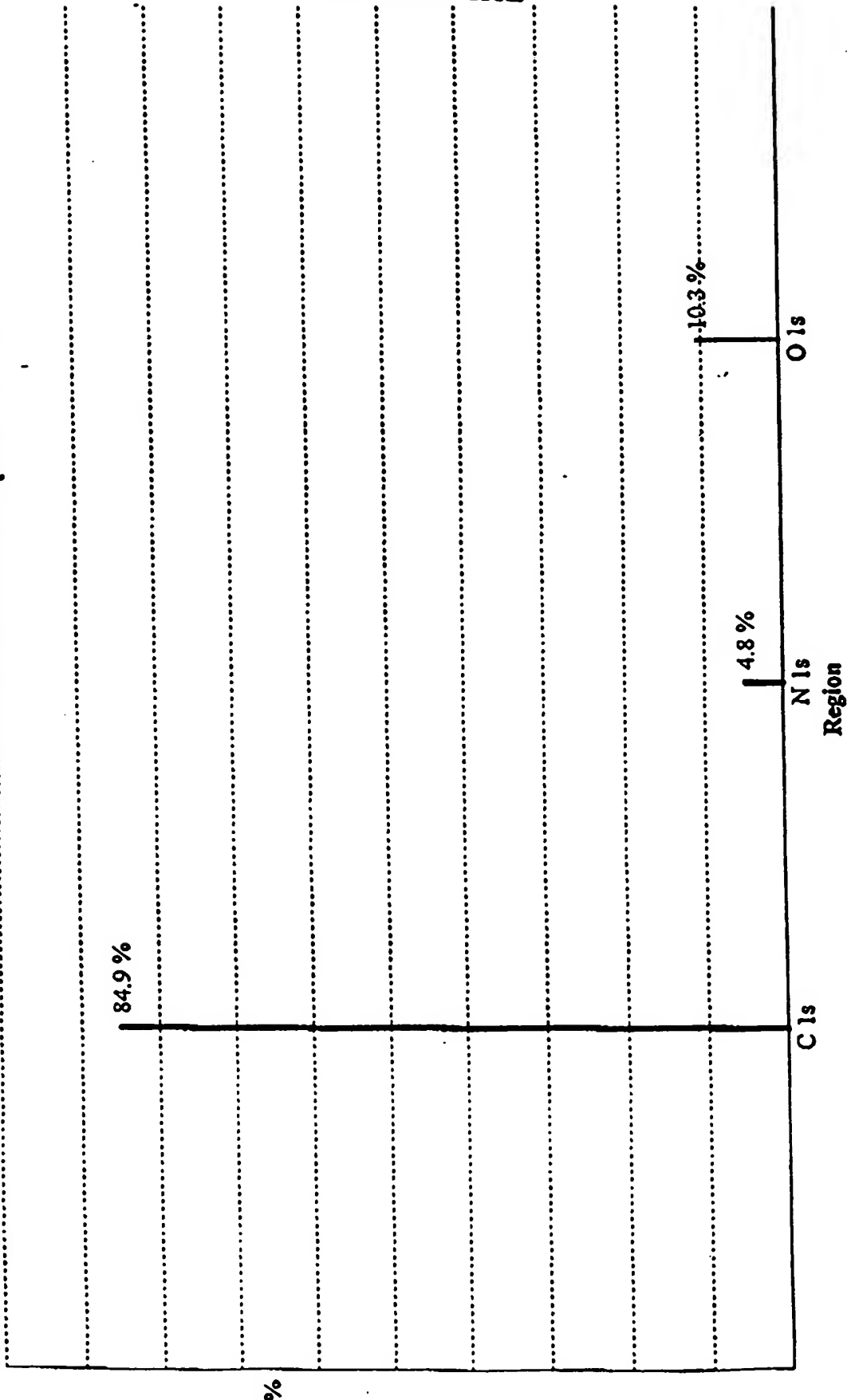
Katz Analytical Services, Inc.
1191-20C-6, Sample #: 1, Angle: 65

XPS Multiplex

Source: Al, Pass Energy: 71.55 eV, Work Function: 4.1 eV

Fig 1A ESCA Multiplex for Heat-Treated Sample 6B

Min: 0 Max: 100



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Hot
cold
probe
in
field
multitrans

... due to the breakage of sensor ...

Ultra Web Long Sock

October 26, 1993

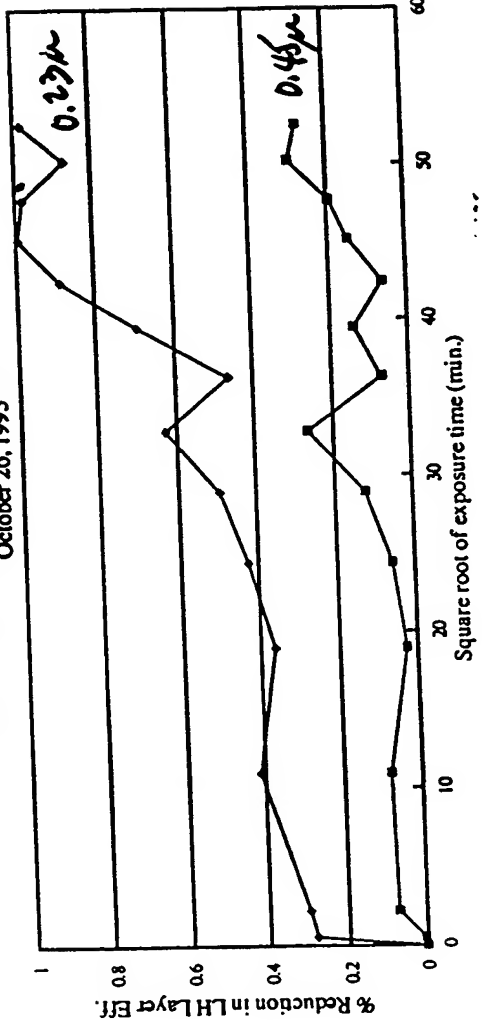


Fig 12

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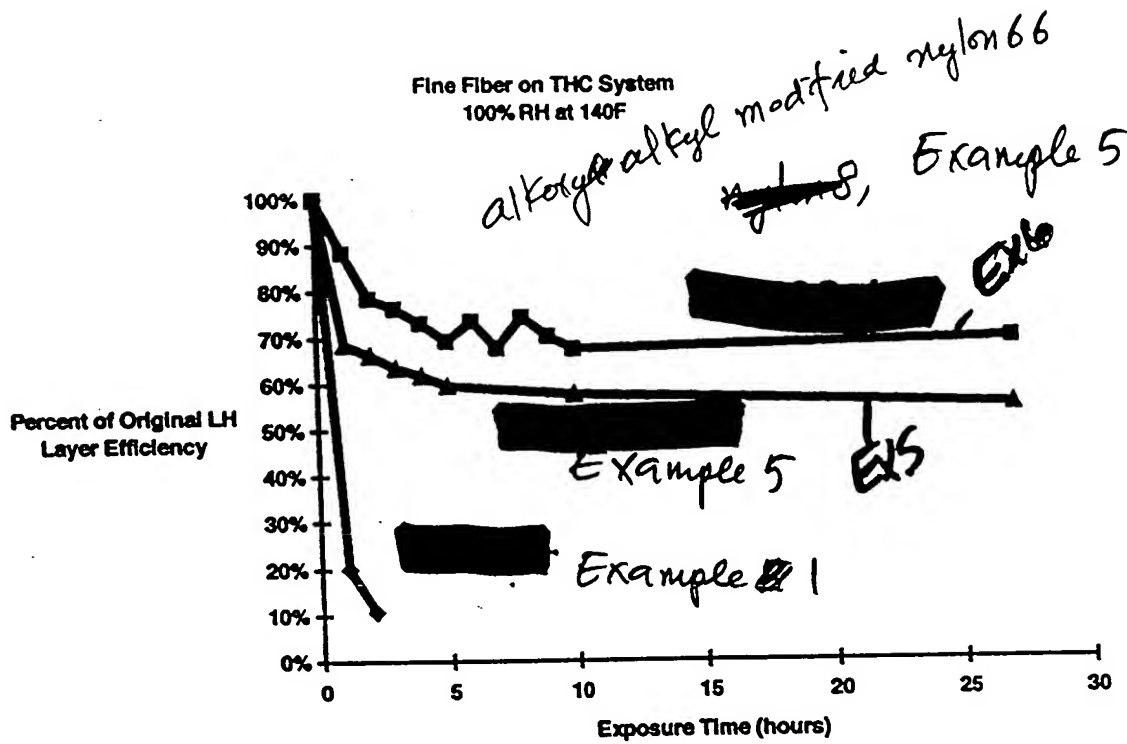
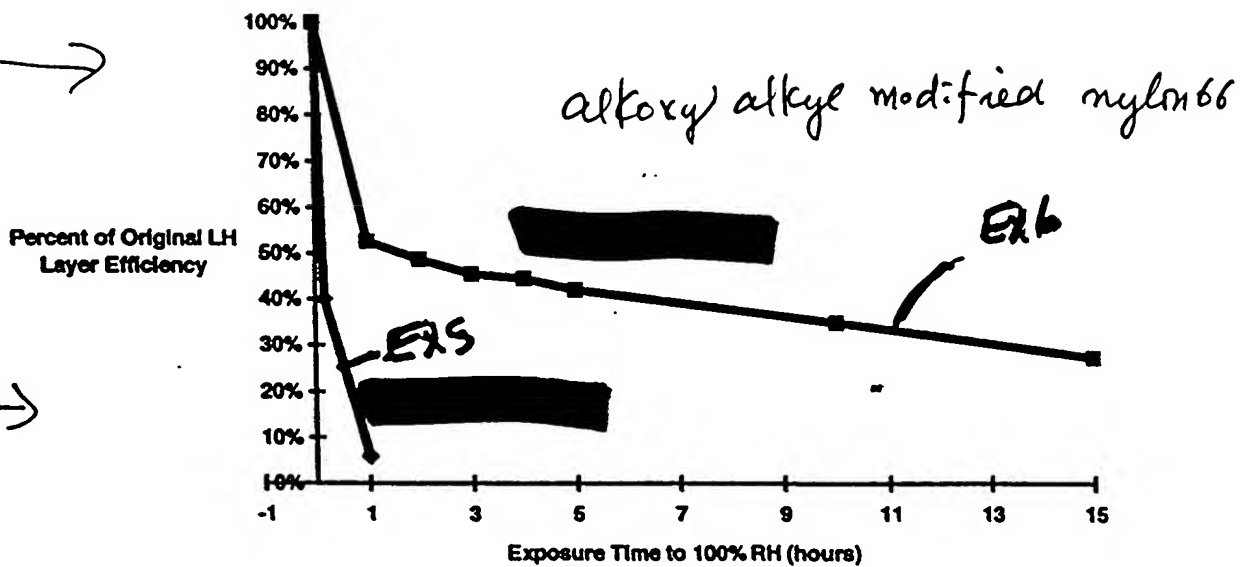


Fig. 13

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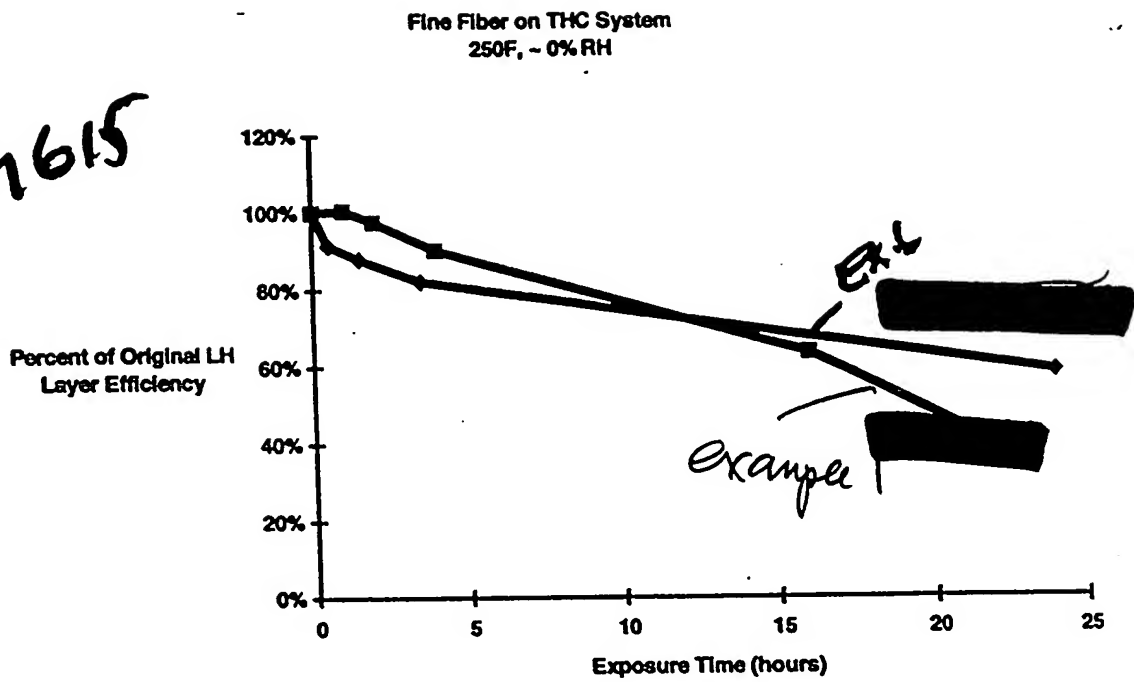
FL 614

Fine Fiber on the THC System
160 F at 100% RH



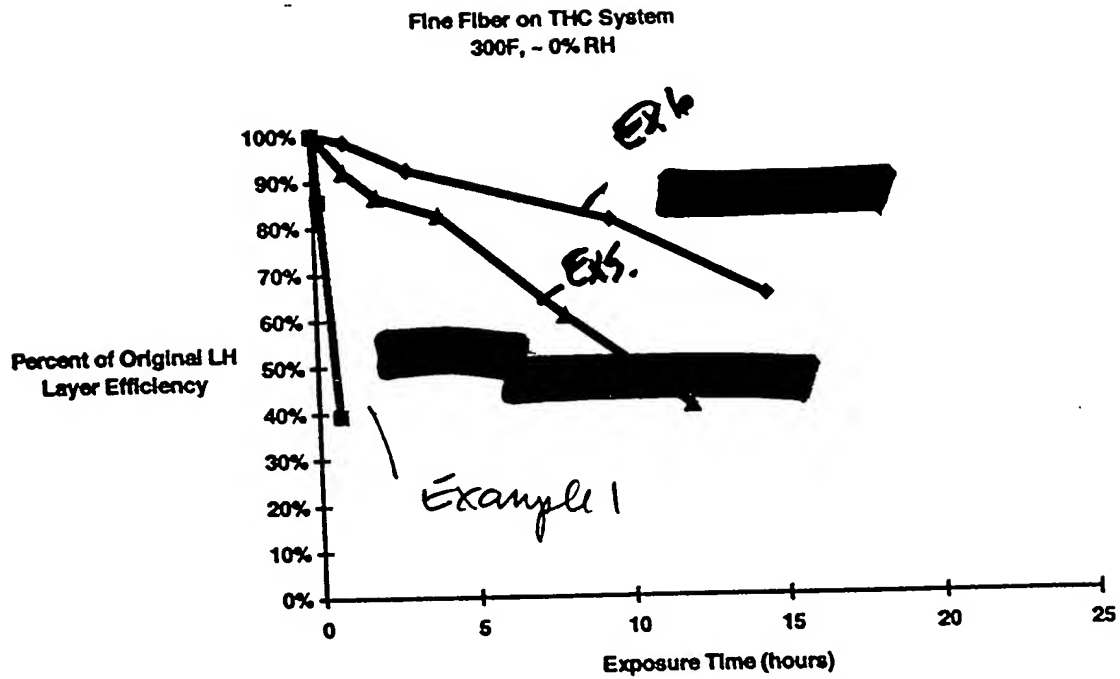
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F1615



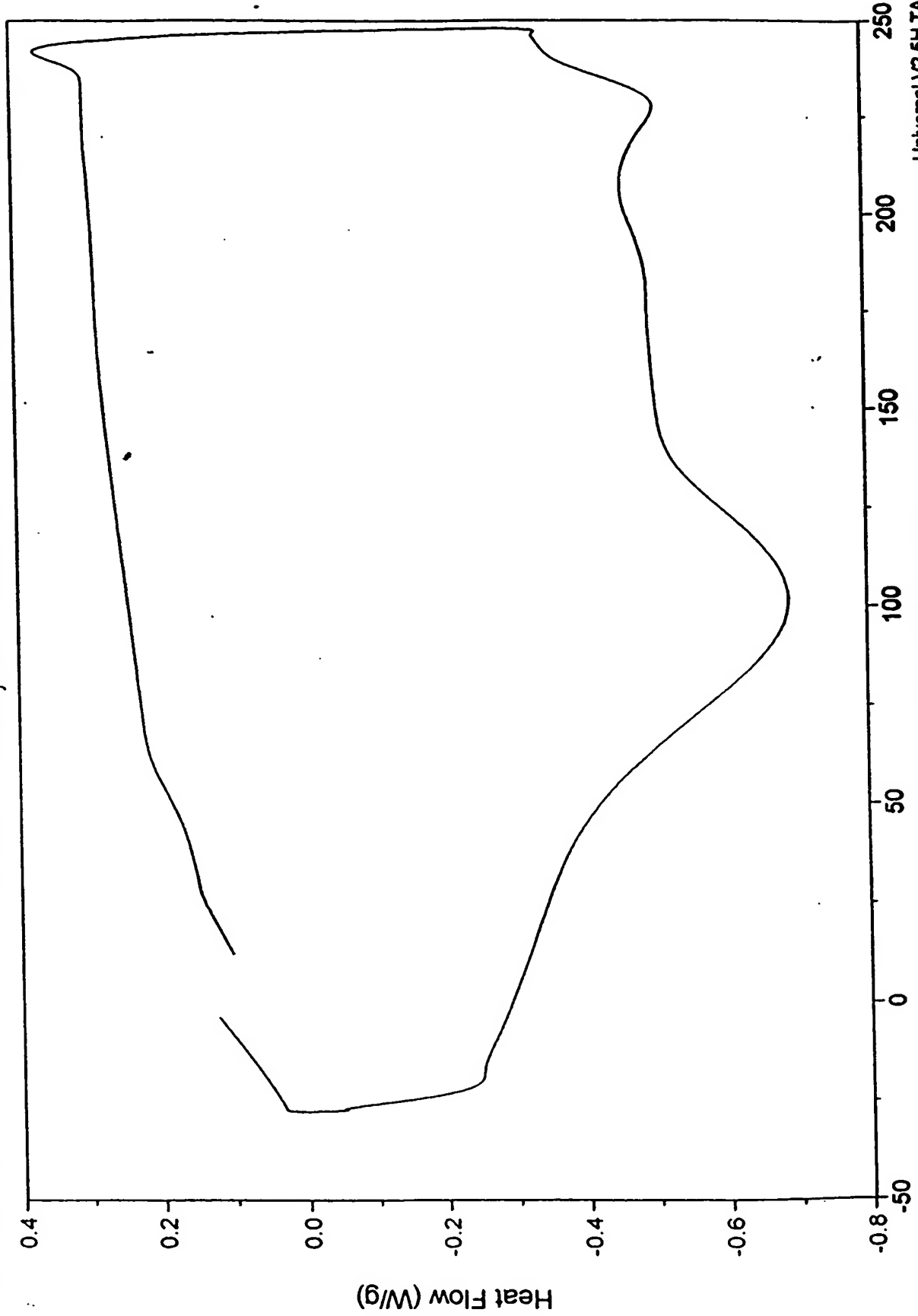
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Fig 16



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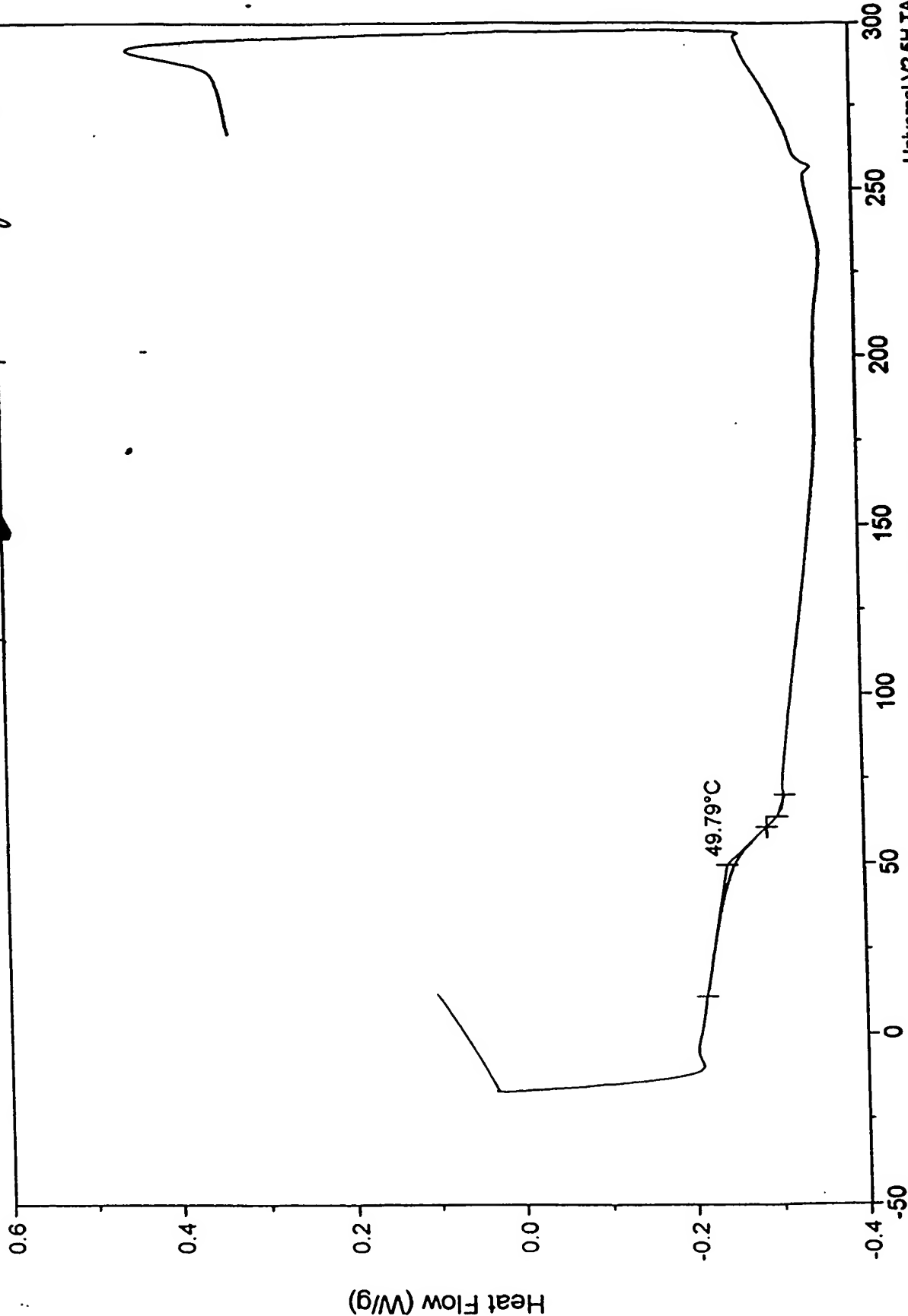
1st Me H
DSC nylon
100% modified 66
Sample: 1191-19C-6
Size: 9.1500 mg
Method: Polymer Samples
Comment: Material characterization



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2nd Melt
DSC
100% modified nylon 66 - After Fully Cross-linked

Sample: 1191-19C-6
Size: 9.1500 mg
Method: Polymer Samples
Comment: Material characterization



Universal V2.5H TA Instruments

Fig 1.18

Exo Up

Sample: 1191-19C-7
Size: 9.8400 mg
Method: Polymer Samples
Comment: Material characterization

Example 6

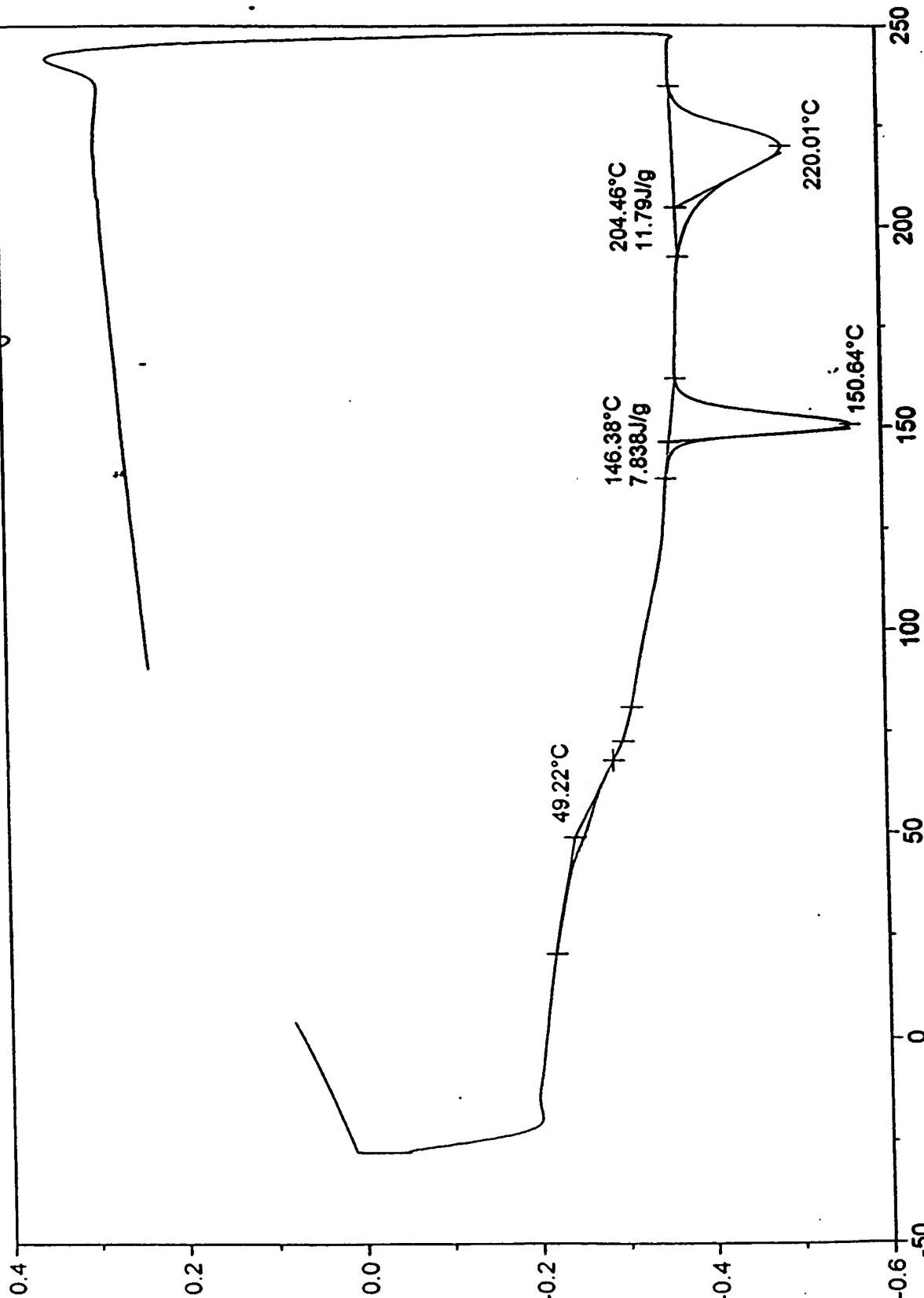
70% modified 66:30% Co-polyamide

1st Melt

DSC

nylon

Heat Flow (W/g)



Exo Up

Temperature (°C)

Universal V2.5H TA Instruments

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Sample: 1191-19C-7
Size: 9.8400 mg
Method: Polymer Samples
Comment: Material characterization
Example 6
170:30
2nd melt
DSC
after Full cross linking

